

**Cluster – Science, Technology, Engineering and Math**  
**Pathway – Engineering and Technology**  
**Program of Study – Pre-Engineering**

**Sample Plan of Study**

	9 <sup>th</sup> Grade	10 <sup>th</sup> Grade	11 <sup>th</sup> Grade	12 <sup>th</sup> Grade
Smart Core	English I or Pre-AP	English II or Pre-AP	English III or AP	English IV or AP
	Algebra I or Geometry	Geometry or Algebra II	Algebra II or Trigonometry Pre- AP Calculus	AP Calculus College Algebra AP Statistics
	Physical Science	Biology Pre-AP Chemistry Applied Biology/Chemistry	Chemistry Physics Principles of Technology	AP Biology AP Chemistry AP Physics Earth & Space Science
	Civics	World History	US History	Economics
<b>Foundation Courses</b> Career Orientation Computer Technology Keyboarding  <b>Graduation Requirements</b> English 4 units Math 4 units Science 3 units Social Studies 3 units Fine Arts ½ unit Health and Safety ½ unit Oral Communication ½ unit Physical Education ½ unit Career Focus 6 units  <b>Arkansas Challenge</b> Foreign Language 2 units		<b>Program of Study Support Courses</b> EAST/Workforce Technology Internship Workplace Readiness  <b>Support Courses</b> Foreign Language Word Processing or Computer Business Applications (CBA)  <b>Extended Learning Opportunities</b> Job Shadowing	<b>Pre Engineering Core Courses</b> Intro to Engineering Design Principals of Engineering Digital Electronics  <b>Pre Engineering Electives</b> Aerospace Engineering Biotechnical Engineering Civil Engineering & Architecture Computer Integrated Manufacturing Engineering Design and Development  <b>Pre Engineering Industry Certifications</b>  <b>Related Programs of Study</b> Drafting and Design Electronics	
Postsecondary Opportunities				
Major		Postsecondary School		Certificate/Degree Program
Biomedical Electronics		NAC Harrison		Associate's Degree
Computer Assisted Drafting/Des		NWACC Bentonville		Associate's Degree
Engineering		ASU Jonesboro		Bachelor's
Master of Engineering		ATU Russellville		Master's
Engineering		UA Fayetteville		Doctoral
Civil Engineering Transportation Engineering		UA Fayetteville, ASU Jonesboro		Bachelor's & Master's
Engineering Physics		ATU Russellville		Bachelor's
Chemical Engineering		UA Fayetteville		Bachelor's, Master's
Engineering Assistant		NPCC Hot Springs		Certificate
Telecommunications Engineering		UA Fayetteville		Master's